## **Comparisons of Job Characteristics**

Focus Occupation: Maintenance and Repair Workers, General (49-9042)

Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and

**Installers (49-9021)** 

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

### Knowledge

Similarity of Focus Occupation to Associated Occupation: 86

Focus Occupation: Maintenance and Repair Workers, General (49-9042)

Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation	
Mechanical	6.8	20.1	19.3	0	Current knowledge level may be sufficient	
Building and Construction	4.0	12.5	14.3	>	Current knowledge level is likely sufficient	
Physics	4.3	11.4	8.8	<<	Extensive education and/or training may be required	
Engineering and Technology	5.7	11.1	10.3	0	Current knowledge level may be sufficient	
Design	5.2	10.3	11.7	>	Current knowledge level is likely sufficient	

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

#### **Skills**

Similarity of Focus Occupation to Associated Occupation: 8

Focus Occupation: Maintenance and Repair Workers, General (49-9042)

Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)

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Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Repairing	3.4	13.5	12.3	0	Current skill level may be sufficient
Troubleshooting	4.5	13.3	10.0	<<	Extensive development of skills in this area may be required
Installation	1.7	12.6	8.3	<<	Extensive development of skills in this area may be required
Equipment Maintenance	3.5	12.3	12.7	0	Current skill level may be sufficient
Operation Monitoring	6.6	11.4	8.4	<<	Extensive development of skills in this area may be required
Quality Control Analysis	5.9	11.2	9.8	<	A higher skill level may be required
Operation and Control	5.4	10.9	7.6	<<	Extensive development of skills in this area may be required

Equipment Selection   3.3   9.4   9.5   0   Current skill level may be s
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The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of  $O^*NET$  (Occupation Information Network) data.

### **Abilities**

#### Similarity of Focus Occupation to Associated Occupation: 88

Focus Occupation: Maintenance and Repair Workers, General (49-9042)
Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation	
Visualization	7.5	12.4	11.0	<	Some improvement in abilities may be required	
Extent Flexibility	4.8	11.8	9.2	<	Some improvement in abilities may be required	
Visual Color Discrimination	6.4	10.3	8.5	<	Some improvement in abilities may be required	
Hearing Sensitivity	5.6	10.0	7.0	<<	Extensive improvement in abilities may be required	
Static Strength	5.0	10.0	9.8	0	Current ability level may be sufficient	
Gross Body Coordination	3.9	7.4	5.8	<	Some improvement in abilities may be required	
Gross Body Equilibrium	3.2	7.1	5.6	<	Some improvement in abilities may be required	

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

# **Activities that Both Occupations Have in Common**

Similarity of Focus
Occupation to Associated
Occupation: 94

Focus Occupation: Maintenance and Repair Workers, General (49-9042)
Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)

Work Activities	Exclusivity of Activity
Adhere to safety procedures	12
Adjust or set mechanical controls or components	69
Align or adjust clearances of mechanical components or parts	72
Apply cleaning solvents	41]
Assemble and install pipe sections, fittings, or plumbing fixtures	71
Assemble, dismantle, or reassemble equipment or machinery	70
Bend tubing or conduit	81
Conduct tests to locate mechanical system malfunction	71
Control HVAC equipment	89
Cut, bend, or thread pipe for gas, air, hydraulic, or water lines	84
Determine installation, service, or repair needed	58
Diagnose mechanical problems in machinery or equipment	65
Estimate time or cost for installation, repair, or construction projects	54

Fabricate, assemble, or disassemble manufactured products by hand  111 Identify properties of metals for repair or ablication activities  171 Install properties of metals for repair or ablication activities  173 Install electrical fixtures or components  174 Install electronic equipment, components, or systems  175 Install electronic equipment, components, or systems  176 Install electronic equipment, components, or systems  177 Install experiment or attachments on machinery or related structures  178 Install installing materials  179 Install installing materials  170 Install installing materials  170 Installing materials  170 Installing materials  171 Installing materials  172 Installing materials  173 Installing materials  174 Installing materials  175 Installing materials  176 Installing materials  177 Installing materials  178 Installing materials  179 Installing materials  170 Installing materials  170 Installing materials  170 Installing materials  170 Installing materials  171 Installing materials  171 Installing materials  172 Installing materials  173 Installing materials  174 Installing materials  175 Installing materials  176 Installing materials  177 Installing materials  177 Installing materials  178 Installing materials  179 Installing materials  179 Installing materials  170 Installing materials  170 Installing materials  170 Installing materials  170 Installing materials  171 Installing materials  171 Installing materials  172 Installing materials  173 Installing materials  174 Installing materials  175 Installing materials  176 Installing materials  177 Installing materials  178 Installing materials  178 Installing materials  179 Installing materials  170 Installing materials  170 Installing materials  170 Installing materials  170 Installing materials  171 Installing materials  172 Installing materials  173 Installing materials  174 Installing materials  175 Installing materials  176 Installing materials  177 Installing materials  178 Installing materials  178 Installing materials  178 Install	Fabricate sheet metal parts or items	80
United   U	·	
Inspect machinery or equipment to determine adjustments or repairs needed 7.1 Install electroic fixtures or components 7.1 Install electroic equipment, components 7.1 Install electroic equipment, components 7.1 Install equipment or attachments on machinery or related structures 7.2 Install equipment or attachments on machinery or related structures 7.2 Install equipment or attachments on machinery or related structures 7.2 Install requipment or attachments on machinery or related structures 7.2 Install insulating materials 7.2 Install insulating 7.2 Install install insulating 7.2 In		
Install electrical fixtures or components  71 Install electronic equipment, components, or systems  62 Install equipment or attachments on machinery or related structures  81 Install insulating materials  81 Install in replace meters, regulators, or related measuring or control devices  63 Install/string electrical or electronic cable or wiring  75 Install/string electrical or electronic cable or wiring  76 Install/string electrical or electronic cable or wiring  77 Install/string electrical or electronic cable or wiring  78 Install/string electrical or electronic cable or wiring  79 Install/string electrical or electronic cable or wiring  70 Install/string electrical or electronic cable or wiring  70 Install/string electrical or electronic cable or wiring  81 Install or repair work tools or equipment wiring  82 Install or repair work tools or equipment wiring  83 Install or repair work tools or equipment  84 Install in repair work tools or equipment  85 Install/string electrical or electronic cable or wiring  86 Install or repair work tools or equipment  87 Install/string electrical or electronic cable or wiring  88 Install or repair work tools or equipment  89 Install or repair work tools or equipment  80 Install or repair work tools or equipment  80 Install or repair work tools or equipment  80 Install or repair work tools or equipment  81 Install or repair work tools or equipment or equipment  82 Install or replace be not machinery or equipment or electronic or purchases supplies, materials, or equipment  83 Install or purchases supplies, materials, or equipment  84 Install or purchases supplies, materials, or equipment  85 Install or purchases supplies, materials, or equipment  86 Install or purchases supplies, materials, or equipment  87 Install or purchases supplies, or equipment or leaks  88 Install or purchases supplies, or equipment or leaks  89 Install or purchases supplies, or equipment or leaks  89 Install or purchases supplies, or equipment or expair setting  80 Install or purchases supplies, mate		42
Install electronic equipment, components, or systems		
Install equipment or attachments on machinery or related structures  Install insulating materials  Install insulating materials  Install or replace meters, regulators, or related measuring or control devices  Install or replace meters, regulators, or related measuring or control devices  Install String electrical or electronic cable or wring  To Install String electrical or electronic cable or wring  Iubricate machinery, equipment, or parts  Maintain or repair industrial or related equipment/machinery  39  Maintain or repair work tools or equipment  Maintain repair records  68  Maintain repair records  68  Move or fit heavy objects  Move or fit heavy objects  Disserve or listen to machinery or equipment operation to detect malfunctions  81  Operate hosts, winch, or hydraulic boom  34  Order or purchase supplies, materials, or equipment  Perform safety inspections in industrial, manufacturing or repair setting  32  Perform safety inspections in industrial, manufacturing or repair setting  33  Read subciprints  10  Read user test piping system or equipment for leaks  89  Read blueprints  10  Read work order, instructions, formulas, or processing charts  90  Read work order, instructions, formulas, or processing charts  91  Repair or replace electrical wring, circuits, fixtures, or equipment  92  Repair or replace electrical wring, circuits, fixtures, or equipment  93  Repair or replace electrical wring, circuits, fixtures, or equipment  94  Repair or replace electrical wring, circuits, fixtures, or equipment  95  Cuder or replace malfunctioning or worn mechanical components  96  Repair or replace electrical wring, circuits, fixtures, or equipment  96  Repair or replace electrical wring, circuits, fixtures, or equipment  97  Repair or replace electrical wring, circuits, fixtures, or equipment  98  Repair or replace electrical wring, circuits, fixtures, or equipment  99  Repair or replace electrical wring, circuits, fixtures, or equipment  90  Understand service or epair manuals  90  Understand service or epair man	·	
Install insulating materials Install or replace meters, regulators, or related measuring or control devices Install/contect electrical equipment to power circuit Install/contect electrical equipment to power circuit Install/string electrical or electronic cable or wiring To Install/string electrical or electronic cable or electronic cable or wiring To Install/string electrical or electronic cable or electronic components To Install/string electrical or electronic connections or omponents To Install/string electrical or electronic connections or components To Install/string electronic electronic electronic or equipment To Install/string electronic electronic electronic or equipment To Install/string electronic electronic electronic electronic or equipment To Install/string electronic electronic electronic or equipment To Install/string electronic electronic electronic electronic or equipment To Install/string electronic electron	· · · · · · · · · · · · · · · · · · ·	48
Install or replace meters, regulators, or related measuring or control devices  (a) Install/string electrical equipment to power circuit (b) 57 (b) Install/string electrical or electronic cable or wiring (c) 76 (c) Ubricate machinery, equipment, or parts (c) 59 (d) Maintain or repair motalstrial or related equipment/machinery (e) 39 (d) Maintain or repair work tools or equipment (e) 65 (e) Maintain or repair work tools or equipment (e) 65 (e) Maintain welding machines or equipment (e) 65 (f) Maintain welding machines or equipment (e) 66 (f) Maintain welding machines or equipment (f) Measure and mark reference points or cutting lines on workpieces (e) 66 (f) Move or fit heavy objects (f) 8 (f) Move or fit heavy objects (f) Move or fit		81
Install/string electrical or electronic cable or wiring 76 Lubricate machinery, equipment, or parts 59 Maintain or repair industrial or related equipment/machinery 39 Maintain or repair work tools or equipment 31 Maintain repair records 55 Maintain repair records 55 Maintain welding machines or equipment 56 Maintain and mark reference points or cutting lines on workpieces 56 Monesure and mark reference points or cutting lines on workpieces 56 Move or fit heavy objects 66 Move or fit heavy objects 68 Move or fit heavy objects 68 Move or histen to machinery or equipment operation to detect malfunctions 68 Move or histen to machinery or equipment operation to detect malfunctions 68 Move or purchase supplies, materials, or equipment 69 Observe or listen to machinery or equipment 74 Operate hoist, which, or hydraulic boom 73 Operate hoist, which, or hydraulic boom 73 Operate hoist, which, or hydraulic boom 73 Perform safety inspections in industrial, manufacturing or repair setting 74 Persition, align, or level machines, equipment, or structures 74 Persition, align, or level machines, equipment, or structures 75 Persesure test piping system or equipment for leaks 75 Read blueprints 75 Read blueprints 76 Read specifications 77 Read work order, instructions, formulas, or processing charts 77 Read work order, instructions, formulas, or processing charts 77 Repair or replace electrical wiring, circuits, fixtures, or equipment 79 Repair or replace electrical wiring, circuits, fixtures, or equipment 79 Repair or replace agas, steam, sewer, or water piping of fixtures 79 Repair or replace agas, steam, sewer, or water piping of fixtures 79 Repair or replace agas, steam, sewer, or water piping of fixtures 79 Repair or replace delectronic connections or components 79 Repair or replace delectronic connections or components 79 Test electrical/electronic wiring, equipment, systems or fixtures 79 Test electrical verification or electronic connections or components 79 Test electrical verification or electronic test devices or equi		66
Lubricate machinery, equipment, or parts  Maintain or repair industrial or related equipment/machinery  Maintain or repair work tools or equipment  Maintain repair records  Maintain welding machines or equipment  Mesaure and mark reference points or cutting lines on workpieces  Move or fit heavy objects  Move or fit heavy objects  Mover or listen to machinery or equipment operation to detect malfunctions  81  Operate hoist, winch, or hydraulic boom  Order or purchase supplies, materials, or equipment  Perform safety inspections in industrial, manufacturing or repair setting  Position, align, or level machines, equipment, or structures  Pressure test piping system or equipment for leaks  Read blueprints  Read schematics  Read schematics  10  Read schematics  11  Repair or replace electrical wiring, circuits, fixtures, or equipment  Mesauring or replace electrical wiring, circuits, fixtures, or equipment  Mesauring or replace electrical wiring, circuits, fixtures, or equipment  Mesauring or replace electrical wiring, circuits, fixtures, or equipment  Mesauring or replace electrical wiring, circuits, fixtures, or equipment  Mesauring or replace electrical wiring, circuits, fixtures, or equipment  Mesauring or replace electrical wiring, circuits, fixtures, or equipment  Mesauring or replace electrical wiring, circuits, fixtures, or equipment  Mesauring or replace electrical wiring, circuits, fixtures, or equipment  Mesauring or replace electrical wiring, circuits, fixtures, or equipment  Mesauring or replace malfunctioning or worn mechanical components  Mesauring or replace electrical wiring, circuits, fixtures, or equipment  Mesauring or replace electrical or electronic connections or components  Mesauring or replace electrical or electronic connections or components  Mesauring or equipment  Mesauring	Install/connect electrical equipment to power circuit	57
Maintain or repair industrial or related equipment/machinery  Maintain or repair vork tools or equipment  Maintain repair records  65  Move or fit heavy objects  Move or fit heavy objects  Observe or listen to machinery or equipment operation to detect malfunctions  Observe or listen to machinery or equipment operation to detect malfunctions  Observe or listen to machinery or equipment operation to detect malfunctions  Order or purchase supplies, materials, or equipment  Order or purchase supplies, materials, or equipment  Perform safety inspections in industrial, manufacturing or repair setting  Position, align, or level machines, equipment, or structures  Position, align, or level machines, equipment for leaks  Read blueprints  10  Read schematics  Read specifications  10  Read schematics  11  Read schematics  12  Read expecifications  12  Read repair or replace electrical wring, circuits, fixtures, or equipment  13  Repair or replace gas, steam, sewer, or water piping or fixtures  Repair or replace emalfunctioning or worn mechanical components  13  Repair or replace electrical vring, circuits, fixtures, or equipment  14  Repair or replace electrical or electronic connections or components  15  Test electrical or electronic connections or components  15  Test electrical or electronic connections or components  15  Test electrical or electronic wiring, equipment, systems or fixtures  Test electrical or electronic wiring, equipment, systems or fixtures  Test electrical or electronic wiring, equipment, systems or fixtures  Test electrical or electronic wiring, equipment, or equipment  15  Test electrical or electronic wiring, equipment, or structures  15  Test electrical or electronic wiring, equipment, or structures  15  Test electrical or electronic wiring, equipment, or structures  15  Test electrical or electronic wiring, equipment, or structures  15  Test electrical or electronic wiring, equipment, or structures  15  Test electrical or electronic wiring, equipment, or structures  15  Test electrical or elec	Install/string electrical or electronic cable or wiring	76
Maintain or repair work tools or equipment       81         Maintain repair records       65         Maintain welding machines or equipment       70         Measure and mark reference points or cutting lines on workpieces       66         Move or fit heavy objects       8         Observe or listen to machinery or equipment operation to detect malfunctions       81         Operate hoist, winch, or hydraulic boorn       34         Order or purchase supplies, materials, or equipment       35         Perform safety inspections in industrial, manufacturing or repair setting       32         Position, align, or level machines, equipment, or structures       74         Pessure test piping system or equipment for leaks       89         Read blueprints       10         Read specifications       23         Read specifications       23         Read work order, instructions, formulas, or processing charts       9         Read work order, instructions, formulas, or processing charts       9         Repair or replace electrical wiring, circuits, fixtures, or equipment       49         Repair or replace agas, steam, sewer, or water piping or fixtures       82         Repair or replace malfunctioning or worm mechanical components       63         Solder electrical or electronic components       63         Sold	Lubricate machinery, equipment, or parts	59
Maintain repair records 65  Maintain welding machines or equipment 70  Measure and mark reference points or cutting lines on workpieces 66  Move or fit heavy objects 87  Observe or listen to machinery or equipment operation to detect malfunctions 81  Operate hoist, winch, or hydraulic boom 34  Order or purchase supplies, materials, or equipment 34  Perform safety inspections in industrial, manufacturing or repair setting 35  Persum safety inspections in industrial, manufacturing or repair setting 35  Persum safety inspections in industrial, manufacturing or repair setting 35  Persum safety inspections in industrial, manufacturing or repair setting 35  Persum safety inspections in industrial, manufacturing or repair setting 36  Persum safety inspections in industrial, manufacturing or repair setting 36  Read schematics 74  Pressure test piping system or equipment for leaks 89  Read schematics 91  Read schematics 91  Read specifications 92  Read technical drawings 97  Read work order, instructions, formulas, or processing charts 99  Repair or adjust measuring or control devices 97  Repair or replace electrical wiring, circuits, fixtures, or equipment 97  Repair or replace gas, steam, sewer, or water piping or fixtures 98  Repair or replace malfunctioning or worm mechanical components 98  Repair or replace malfunctioning or worm mechanical components 98  Replace electrical or electronic components 98  Test mechanical products or equipment 96  Understand service or repair manuals 96  Understand service or repair manuals 96  Understand service or repair manuals 96  Understand technical operating, service or repair manuals 96  Use arcwelding equipment 96  Use accombination welding procedures 96  Use electrical or electronic test devices or equipment 96  Use hand or power woodworking tools 96  Use hand or power woodworking tools 96  Use hand or power woodworking tools 96	Maintain or repair industrial or related equipment/machinery	39
Maintain welding machines or equipment  Messure and mark reference points or cutting lines on workpieces  66  Move or fit heavy objects  87  Mose or fit heavy objects  88  Move or fit heavy objects  89  Observe or listen to machinery or equipment operation to detect malfunctions  81  Operate hoist, winch, or hydraulic boom  34  Order or purchase supplies, materials, or equipment  85  Perform safety inspections in industrial, manufacturing or repair setting  86  Person safety inspections in industrial, manufacturing or repair setting  87  Pressure test piping system or equipment for leaks  89  Read blueprints  100  Read schematics  101  Read specifications  102  Read electricial drawings  102  Repair or replace electrical wiring, circuits, fixtures, or equipment  103  Repair or replace malfunctioning or worn mechanical components  103  Repair or replace malfunctioning or worn mechanical components  103  Replace electrical or electronic connections or components  104  Rest electrical or electronic connections or components  105  Rest electrical or electronic connections or components  106  Rest electrical or electronic connections or components  107  Rest electrical or electronic connections or components  108  Rest electrical or electronic connections or components  109  Rest electrical or electronic connections or components  100  Rest electrical or electronic connections or components  101  Rest electrical or electronic connections or components  108  Rest electrical or electronic connections or components  109  Rest electrical or electronic connections or components  100  Rest electrical or electronic connections or components  107  Rest electrical or electronic connections or components  108  Rest electrical or electronic connections or components  109  Rest electrical or electronic connections or components  100  Rest electrical or electronic connections or components  101  Rest electronic electronic connections or components  108  Rest electrical or electronic connections or components  109  Rest electroni	Maintain or repair work tools or equipment	81
Measure and mark reference points or cutting lines on workpieces       66         Move or fit heavy objects       8         Observe or listen to machinery or equipment operation to detect malfunctions       81         Operate hoist, winch, or hydraulic boom       34         Order or purchase supplies, materials, or equipment       35         Perform safety inspections in industrial, manufacturing or repair setting       32         Position, align, or level machines, equipment, or structures       74         Pressure test piping system or equipment for leaks       89         Read blueprints       10         Read schematics       34         Read specifications       23         Read work order, instructions, formulas, or processing charts       9         Repair or adjust measuring or control devices       71         Repair or replace electrical wiring, circuits, fixtures, or equipment       49         Repair or replace gas, steam, sewer, or water piping or fixtures       82         Repair or replace gas, steam, sewer, or water piping or fixtures       82         Repair or replace electrical wiring, circuits, fixtures, or equipment       49         Repair or replace electronic components       62         Repair or replace electronic wiring, equipment, systems or fixtures       52         Test electrical/electronic wiring, equipment,	Maintain repair records	65
Move or fit heavy objects  Observe or listen to machinery or equipment operation to detect malfunctions  81 Observe or listen to machinery or equipment operation to detect malfunctions  81 Order or purchase supplies, materials, or equipment Perform safety inspections in industrial, manufacturing or repair setting  Position, align, or level machines, equipment, or structures  Pressure test piping system or equipment for leaks  Read blueprints  Read schematics  Read specifications  Read technical drawings  Read work order, instructions, formulas, or processing charts  Repair or adjust measuring or control devices  71 Repair or replace gas, steam, sewer, or water piping or fixtures  Repair or replace gas, steam, sewer, or water piping or fixtures  Repalace malfunctioning or worn mechanical components  62 Replace electrical or electronic components  63 Solder electrical or electronic connections or components  64 Understand service or repair manuals  40 Understand service or repair manuals  64 Use basic carpentry techniques  65 Use basic carpentry techniques  Cuse basic plumbing techniques  Cuse basic or power woodworking tools  65 Use hand or power woodworking tools  65 Use hand or power woodworking tools	Maintain welding machines or equipment	70
Observe or listen to machinery or equipment operation to detect malfunctions       81         Operate hoist, winch, or hydraulic boom       34         Order or purchase supplies, materials, or equipment       35         Perform safety inspections in industrial, manufacturing or repair setting       32         Position, align, or level machines, equipment, or structures       74         Pressure test piping system or equipment for leaks       89         Read blueprints       10         Read schematics       34         Read specifications       23         Read technical drawings       7         Read technical drawings       9         Repair or adjust measuring or control devices       71         Repair or replace electrical wiring, circuits, fixtures, or equipment       49         Repair or replace electrical wiring, circuits, fixtures, or equipment       49         Repair or replace malfunctioning or worn mechanical components       62         Replace electronic components       63         Solder electrical or electronic connections or components       63         Solder electrical or electronic connections or components       55         Test electrical/electronic wiring, equipment, systems or fixtures       54         Test electrical or performanuals       40         Understand technical operati	Measure and mark reference points or cutting lines on workpieces	66
Operate hoist, winch, or hydraulic boom       34         Order or purchase supplies, materials, or equipment       35         Perform safety inspections in industrial, manufacturing or repair setting       32         Position, align, or level machines, equipment, or structures       74         Pressure test piping system or equipment for leaks       89         Read blueprints       10         Read schematics       34         Read specifications       23         Read technical drawings       7         Read work order, instructions, formulas, or processing charts       9         Repair or adjust measuring or control devices       71         Repair or replace electrical wiring, circuits, fixtures, or equipment       49         Repair or replace gas, steam, sewer, or water piping or fixtures       82         Repair or replace malfunctioning or worn mechanical components       62         Replace electrical components       63         Solder electrical or electronic components       55         Test mechanical products or equipment       56         Understand service or repair manuals       40         Understand technical operating, service or repair manuals       6         Use basic carpentry techniques       62         Use basic carpentry techniques       62 <t< td=""><td>Move or fit heavy objects</td><td>8</td></t<>	Move or fit heavy objects	8
Order or purchase supplies, materials, or equipment    35     Perform safety inspections in industrial, manufacturing or repair setting   32     Position, align, or level machines, equipment, or structures   74     Pressure test piping system or equipment for leaks   89     Read blueprints   10     Read schematics   34     Read specifications   23     Read technical drawings   7     Read work order, instructions, formulas, or processing charts   89     Repair or adjust measuring or control devices   71     Repair or replace electrical wiring, circuits, fixtures, or equipment   89     Repair or replace all-functioning or worn mechanical components   62     Repair or replace malfunctioning or worn mechanical components   63     Solder electrical or electronic connections or components   55     Test electrical/electronic wiring, equipment, systems or fixtures   54     Understand service or repair manuals   Understand service or repair manuals   Understand technical operating, service or repair manuals   Understand technical operating, service or repair manuals   Use accetylene welding/cutting torch   54     Use basic carpentry techniques   62     Use basic carpentry techniques   62     Use basic or electronic test devices or equipment   04     Use combination welding procedures   Use leand or power tools   Use hand or power woodworking tools	Observe or listen to machinery or equipment operation to detect malfunctions	81
Perform safety inspections in industrial, manufacturing or repair setting  Position, align, or level machines, equipment, or structures  Pressure test piping system or equipment for leaks  Read blueprints  Read schematics  Read specifications  Read specifications  Read technical drawings  Read technical drawings  Read technical drawings  Repair or adjust measuring or control devices  Repair or replace electrical wiring, circuits, fixtures, or equipment  49  Repair or replace als, steam, sewer, or water piping or fixtures  Repair or replace malfunctioning or worn mechanical components  62  Replace electronic components  63  Solder electrical or electronic connections or components  65  Test electrical/electronic wiring, equipment, systems or fixtures  75  Test electrical/electronic wiring, equipment, systems or fixtures  76  Understand service or repair manuals  40  Understand service or repair manuals  61  Use acetylene welding/cutting torch  72  Use acmeling techniques  73  Use combination welding procedures  Cuse basic curponer tools  Cuse hand or power tools  Cuse hand or power woodworking tools  65  Cuse hand or power woodworking tools  Cuse hand or power woodworking tools	Operate hoist, winch, or hydraulic boom	34
Position, align, or level machines, equipment, or structures Pressure test piping system or equipment for leaks  Read blueprints 10 Read schematics 34 Read specifications Read specifications Read work order, instructions, formulas, or processing charts Repair or adjust measuring or control devices Repair or replace electrical wiring, circuits, fixtures, or equipment Repair or replace system, sewer, or water piping or fixtures Repair or replace malfunctioning or worn mechanical components Replace electrical or electronic connections or components Solder electrical or electronic wiring, equipment, systems or fixtures Test electrical/electronic wiring, equipment Understand service or repair manuals Understand technical operating, service or repair manuals Suse acetylene welding/cutting torch Use acetylene welding/cutting torch Use basic carpentry techniques Use basic plumbing techniques Use basic plumbing techniques Use hand or power tools Use hand or power tools Use hand or power woodworking tools	Order or purchase supplies, materials, or equipment	35
Pressure test piping system or equipment for leaks  Read blueprints  10  Read schematics  34  Read specifications  Read technical drawings  Read work order, instructions, formulas, or processing charts  Repair or adjust measuring or control devices  Repair or replace electrical wiring, circuits, fixtures, or equipment  Repair or replace and functioning or worn mechanical components  Replace electronic components  Solder electrical/relectronic wiring, equipment, systems or fixtures  Test electrical/electronic wiring, equipment  Understand service or repair manuals  Understand service or repair manuals  Use acetylene welding/cutting torch  Use basic carpentry techniques  Use son power tools  Use hand or power tools  Use hand or power woodworking tools  889  89  89  89  89  89  89  89  89	Perform safety inspections in industrial, manufacturing or repair setting	32
Read blueprints         10           Read schematics         34           Read specifications         23           Read technical drawings         7           Read work order, instructions, formulas, or processing charts         9           Repair or adjust measuring or control devices         71           Repair or replace electrical wiring, circuits, fixtures, or equipment         49           Repair or replace gas, steam, sewer, or water piping or fixtures         82           Repair or replace malfunctioning or worn mechanical components         62           Replace electrical components         63           Solder electrical or electronic connections or components         55           Test electrical/electronic wiring, equipment, systems or fixtures         54           Test mechanical products or equipment         56           Understand service or repair manuals         40           Understand technical operating, service or repair manuals         6           Use actylene welding/cutting torch         54           Use arc welding equipment         62           Use basic carpentry techniques         62           Use basic plumbing techniques         72           Use combination welding procedures         68           Use hand or power tools         2           U	Position, align, or level machines, equipment, or structures	74
Read schematics       34         Read specifications       23         Read technical drawings       7         Read work order, instructions, formulas, or processing charts       9         Repair or adjust measuring or control devices       71         Repair or replace electrical wiring, circuits, fixtures, or equipment       49         Repair or replace gas, steam, sewer, or water piping or fixtures       82         Repair or replace malfunctioning or worn mechanical components       62         Replace electronic components       63         Solder electrical or electronic connections or components       55         Test electrical/electronic wiring, equipment, systems or fixtures       54         Test mechanical products or equipment       56         Understand service or repair manuals       40         Understand technical operating, service or repair manuals       6         Use actylene welding/cutting torch       54         Use arc welding equipment       62         Use basic carpentry techniques       62         Use basic plumbing techniques       72         Use combination welding procedures       68         Use learnical or electronic test devices or equipment       40         Use hand or power woodworking tools       65	Pressure test piping system or equipment for leaks	89
Read specifications         23           Read technical drawings         7           Read work order, instructions, formulas, or processing charts         9           Repair or adjust measuring or control devices         71           Repair or replace electrical wiring, circuits, fixtures, or equipment         49           Repair or replace gas, steam, sewer, or water piping or fixtures         82           Repair or replace malfunctioning or worn mechanical components         62           Replace electronic components         63           Solder electrical or electronic connections or components         55           Test electrical/electronic wiring, equipment, systems or fixtures         54           Test mechanical products or equipment         56           Understand service or repair manuals         40           Understand technical operating, service or repair manuals         6           Use acetylene welding/cutting torch         54           Use arc welding equipment         62           Use basic carpentry techniques         62           Use basic plumbing techniques         62           Use combination welding procedures         68           Use learn or electronic test devices or equipment         40           Use hand or power tools         2           Use hand or power woodworking tools <td>Read blueprints</td> <td>10</td>	Read blueprints	10
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Use high voltage apparatus 76	Use hand or power woodworking tools	65
	Use high voltage apparatus	76

Use knowledge of metric system	39
Use knowledge of ventilation systems	89
Use knowledge of welding filler rod types	75
Use pipe fitting equipment	80
Use precision measuring devices in mechanical repair work	61
Use precision tools in electronics repair	71
Use pressure gauges	76
Use soldering equipment	44
Use tube bending equipment	95
Use voltmeter, ammeter, or ohmmeter	52
Weld together metal parts, components, or structures	54

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

# **Tools and Technologies that Both Occupations Have in Common**

Similarity of Focus
Occupation to Associated
Occupation: 86

Focus Occupation: Maintenance and Repair Workers, General (49-9042)
Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)

Tools and Technologies	Exclusivity
Business function specific software	1
Cleaning equipment	11
Compressors	9
Computers	1
Content authoring and editing software	1
Cutting and crimping and punching tools	3
Cutting tools	18
Dispensing tools	6
Earth moving machinery	11
Electrical measuring and testing equipment	7
Fall protection	16
Forming tools	2
Garden tools	12
Holding and clamping tools	3
Indicating and recording instruments	2
Industrial trucks	10
Industry specific software	1
Information exchange software	1
Ladders and scaffolding	6
Length and thickness and distance measuring instruments	2
Lifting equipment and accessories	3
Machine tools	7
Marking tools	11
Measuring and layout tools	3
Mechanical instruments	14

Metal bending and forming machinery	17
Network applications software	1
Personal communication devices	2
Power tools	2
Prying and bending tools	10
Pulling tools	31
Pumps	9
Respiratory protection	6
Rough and finishing tools	5
Safety apparel	4
Sampling equipment	12
Sealing tools	21
Soldering and brazing and welding machinery and supplies	6
Special tooling fixtures	16
Surveillance and detection equipment	11
Tool attachments and accessories	12
Viewing and observing instruments and accessories	4
Vision protection and accessories	3
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.